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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/719,103	11/21/2003	Jang-Kun Song	AB-1346 US	1943

7590 06/01/2006

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EXAMINER
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CHOWDHURY, TARIFUR RASHID

ART UNIT	PAPER NUMBER
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2871

DATE MAILED: 06/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

H.A

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/719,103	SONG, JANG-KUN	
	<b>Examiner</b>	<b>Art Unit</b>	
	Tarifur R. Chowdhury	2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 13 February 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) 17-30 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

DETAILED ACTION

***Claim Rejections - 35 USC § 102***

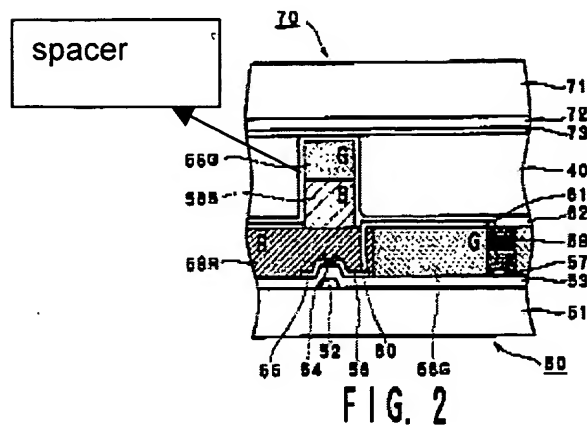
1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. **Claims 1-3, 5.7, and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Miyazaki et al. (U.S. Patent No. 5,757,451, hereafter "Miyazaki").**

3. As to claim 1, Miyazaki discloses a liquid crystal display (LCD) apparatus (fig. 2) comprising a first panel (50) including a first transparent substrate (71) having a pixel area, a thin film transistor disposed at the pixel area so as to output a pixel voltage, a color filter (58R, 58G) disposed at the pixel area, a spacer (58G,58B) disposed between the pixel area and an adjacent pixel area, the color filter spacer having a same material as the color filter, a pixel electrode (61) on the color filter so as to receive the pixel voltage, a second panel (70) including a second transparent substrate (71) and a common (72) electrode on the second substrate, and a liquid crystal layer (40) disposed between the first and second panels.



As per claim 2, Miyazaki discloses the LCD apparatus as recited above where the color filter comprises a red, a green, and a blue color filter (fig. 3, R, G, B) and the spacer comprise at least one of a red, a green, and a blue filter (fig. 2, ref. 58G, 588; col. 6, lines 51-58).

Regarding claims 3, 5, 7, and 9, Miyazaki discloses the LCD apparatus as recited above where the second panel comprises a light-blocking pattern (fig. 1, ref. 36) having a lattice-shape (col. 5, lines 2-3) of a photosensitive pattern (col. 11, lines 21-25) disposed on the common electrode (34), where the pattern blocks light incident between the pixel area and the adjacent pixel.

#### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**5. Claims 4,6,8, 10-11, 13, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyazaki in view of Yamada (U.S. Patent No. 6,140,988).**

6. Miyazaki discloses the LCD apparatus as recited above having a liquid crystal layer (40) and light visual angle pattern (col. 1, lines 23-34) on the common electrode, however, the reference fails to specifically disclose the liquid crystal molecules being vertically aligned.

Yamada discloses an LCD apparatus where the liquid crystal molecules being vertically aligned (col. 1, lines 29-39).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the liquid crystal molecules being vertically aligned since one would be motivated to provide a display apparatus with high contrast and outstanding viewing angle characteristics (col. 1, lines 39-45).

**7. Claims 12, 14, 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyazaki in view of Yamada, and in further view of Iida et al. (U.S. Patent No. 5,801,797, hereafter "Iida").**

8. Miyazaki, when modified by Yamada, discloses the LCD apparatus as recited above, however, the reference fails to specifically disclose the second panel further comprising transparent spacers disposed on the common electrode.

lida discloses an LCD device having spacers made of transparent resin (col. 13, lines 52).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the second substrate further comprising transparent spacers disposed on the common electrode since one would be motivated to provide a display having a large display area in which no display-impossible region is formed (col. 13, lines 55-59).

#### ***Response to Arguments***

9. Applicant's arguments filed February 13, 2006 have been fully considered but they are not persuasive.

In response to applicant's argument that in Miyazaki the spacer is formed on the TFT whereas in the instant invention a TFT is formed at the pixel area and a spacer is disposed between the pixel area and the adjacent pixel area, it is respectfully pointed out to applicant that the claim limitation does not preclude formation of spacers on the TFT and further since the pixel area is not defined as an area where only the TFT is formed and Miyazaki clearly shows that the spacer is formed between one pixel area and an adjacent pixel area, Miyazaki does anticipate the claim Applicant's invention and thus the rejection was proper and maintained.

#### ***Conclusion***

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

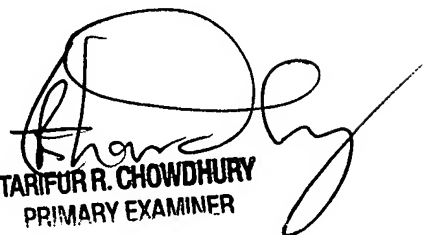
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tarifur R. Chowdhury whose telephone number is (571) 272-2287. The examiner can normally be reached on M-Th (6:30-5:00) Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim can be reached on (571) 272-2293. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2871

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TRC  
May 29, 2006



TARIFUR R. CHOWDHURY  
PRIMARY EXAMINER